

## WHAT IS CLAIMED IS:

1. A reflector made of glass for a projector comprising amorphous glass having a thermal expansion coefficient of  $30$  to  $45 \times 10^{-7}/^{\circ}\text{C}$  and including a reflective surface for reflecting light emitted from a light source and an opening for inserting a light source bulb or a conductor to said light source bulb, wherein:  
said opening is smoothed by heat-treating the surface thereof after opening-drilling, thus mechanical damage is removed from the processed part.
2. A reflector made of glass for a projector according to Claim 1, wherein said opening is smoothed by applying a flame by a burner.
3. A reflector made of glass for a projector according to Claim 2, wherein the mean roughness of said smoothed surface is  $0.03 \mu\text{m}$  or less.
4. A reflector made of glass for a projector according to Claim 1, wherein said opening is smoothed by applying a flame by a burner and the mean roughness of said smoothed surface is  $0.03 \mu\text{m}$  or less.
5. A reflector made of glass for a projector according to Claim 4, wherein said reflective surface is in a shape of a rotational elliptical surface or a rotational parabolic surface and the surface accuracy in the neighborhood of said opening is less than  $\pm 20 \mu\text{m}$  for an ideal curved surface.
6. A reflector made of glass for a projector according to Claim 1, wherein said opening is smoothed by radiation of a laser beam.
7. A reflector made of glass for a projector according to Claim 6, wherein said reflective surface is in a shape of a rotational elliptical surface or a rotational parabolic surface and the surface accuracy in the neighborhood of said opening is less than  $\pm 20 \mu\text{m}$  for an ideal curved surface.

8. A reflector made of glass for a projector comprising amorphous glass having a thermal expansion coefficient of  $30 \text{ to } 40 \times 10^{-7}/^{\circ}\text{C}$  and including a reflective surface for reflecting light emitted from a light source and an opening for inserting a light source bulb or a conductor to said light source bulb, wherein: said opening is smoothed by applying a flame to the surface thereof by a burner after opening-drilling and the mean roughness of said smoothed surface is  $0.03 \mu\text{m}$  or less.

9. A reflector made of glass for a projector according to Claim 8, wherein said reflective surface is in a shape of a rotational elliptical surface or a rotational parabolic surface and the surface accuracy in the neighborhood of said opening is less than  $\pm 20 \mu\text{m}$  for an ideal curved surface.

10. A manufacturing method for a reflector made of glass for a projector having a reflective surface for reflecting light emitted from a light source and an opening for inserting a light source bulb or a conductor to said light source bulb, comprising:

the press-molding step of press-molding molten glass in a predetermined reflector shape by a mold having a bottom mold and a plunger,

the opening forming step of forming said opening by removing glass at the part touching said opening of said reflector formed at said press-molding step, and

the surface smoothing step of heat-treating said opening formed at said opening forming step to smooth the surface thereof, thereby removing mechanical damage from the processed part.

11. A manufacturing method for a reflector made of glass for a projector according to Claim 10, wherein said opening forming step heats said part touching said opening and then forms said opening by punching from the side of said reflective surface.

12. A manufacturing method for a reflector made of glass for a projector according to Claim 10, wherein said opening forming step forms said opening by a drill from the side of said reflective surface.
13. A manufacturing method for a reflector made of glass for a projector according to Claim 10, wherein said opening forming step forms said opening by cutting said part touching said opening.
14. A manufacturing method for a reflector made of glass for a projector according to Claim 10, wherein said surface smoothing step smoothes said surface by applying a flame to said opening so that the mean roughness of said surface becomes  $0.03\text{ }\mu\text{m}$  or less.
15. A manufacturing method for a reflector made of glass for a projector according to Claim 10, wherein said surface smoothing step smoothes said surface by radiating a laser beam to said opening.